

captivity. On referring to the literature of the species, I find that the animal has been figured by S. Müller (Zool. Ind. Archip., Mamm. pl. xvii.) under the name *Potamophilus barbatus*, and by MM. Eydoux and Souleyet (Voyage de la Bonite, Mamm. pl. vi.). But a comparison of the present sketch with the figures given by the above-named authors will at once show that their figures could not have been drawn from life, and that both are practically useless for the purpose of identification.

In form and size this animal resembles partly a *Prionodon* and partly a *Paradoxurus*. The head is elongated, muzzle broad and depressed, the breadth of the muzzle appearing more pronounced owing to the exceptional character of the upper lip, which is much thickened in order to support the roots of the abundant and well-developed whiskers. A bunch of whiskers below each ear and close to the outer angle of the eye; also an intermediate set on each side of the nose between the eye and the lip. A tuft of vibrissæ on the chin between the lower lip and the throat. Eyes large and oblique; ears small and round; nostrils with distinct lobes adapted for a subaquatic life. Tail moderate and thick. Prevailing colour of the coat grey, grizzled white on the back, rump, and outer aspects of the limbs; a dark band on the crown and nape; eyebrows white to a certain extent; a white spot on each side of the head below the ears corresponding with the place of insertion of the whiskers in this region; lips white. Underparts blackish. Tip of the tail whitish. Toes slightly webbed, resembling those of *Lutra leptonyx* from a distance. Length of the head and body about 32 inches, tail about 9.5 inches.

Except very early in the morning I have never seen this animal leave its cage during the day, and though it never appears to be particularly savage, it always resents the approach of its keeper or anyone else by a sort of low subdued snarling. The presence of a strong Civet-like smell near its cage, especially at night, unmistakably indicates the possession of odoriferous glands. Although said to be omnivorous, it shows greater partiality for an animal than a vegetable diet, and relishes fish more than flesh. I have never observed it indulging in its aquatic habits here.

Calcutta, January 10, 1894.

3. Field-Notes on the Mammals of Uruguay.

By O. V. APLIN.

[Received March 3, 1894.]

The following notes relate almost entirely to the Departments of Soriano and Rio Negro, and were made during a residence in the country from October 1892 to June 1893. My thanks are due to Mr. Oldfield Thomas for his kindness in naming such of the species as were unknown to me, and in giving me the correct modern names for some others.

I may draw attention to the fact that, so far as purely terrestrial animals are concerned, Uruguay is geographically separated from the Argentine States by effective natural boundaries—the Rio de la Plata on the south and the Rio Uruguay on the west. The latter river has apparently proved less passable than the muddy Rio Paraná.

GEOFFROY'S CAT (*Felis geoffroyi*).

The beautiful spotted "Gato del Monte," or "Monte Cat," is now becoming rare in the part of Soriano where I was living. The skins exhibit a little variety, some having the spots larger and more distinct than others. It is kept down as much as possible on sheep-camps by trapping.

PAJA CAT (*Felis passerum*).

The Paja or Grass Cat ("Gato pajero") is also getting scarce in this district owing to the systematic trapping which is carried on. Two kittens which were brought in (dead, alas!) on the 29th October were spotted on the legs and lower parts, and it was suggested that they might be the result of a cross with the Monte Cat; but as the skins of two more kittens, brought in with that of the old female a few days before, were just the same, the spotted dress in youth is evidently natural to this species. Exactly the same thing happens in the case of the Puma (*vide infra*).

PUMA (*Felis concolor*)¹.

The Puma is now extinct in many parts of the country, but in the monte along the Uruguay river it is still found. An estanciero living at Cordova in Argentina tells me he has seen both Pumas and Jaguars coming down the big rivers on tree-trunks. In this way stray examples might very well turn up in a district long after the native breed was extinct. I heard that it was still found, although very rarely, in the monte of the Rio Negro on that part of the coast of the river which I visited in the Department of that name; but all I could hear of it in South Soriano was a report that one had been seen on the Arroyo de Monzon some years ago. We had on board the ship I came home in two Puma cubs, the smaller of which was indistinctly spotted. A German friend living in the South of Patagonia tells me that very young ones are always so.

AZARA'S FOX (*Canis azaræ*).

Azara's Fox, the common "Zorro," is still numerous despite systematic trapping, and affords moderate sport to some Englishmen; among others to a neighbour of my host, whose pack included two imported foxhounds, a rarity indeed, and has achieved signal success. This fox is quite as bold as the English one in coming about the houses at night. Going out of my room one moonlight night I saw a fox bolt out of the patio! One which was caught

¹ See figures of young Pumas, P. Z. S. 1861, p. 141, pl. xxii.

as a small cub and brought up at Santa Elena became perfectly tame. He was kept on chain, and upon being visited would jump up like a dog, and also throw himself at full length on his side upon the ground to have his back and sides tickled, closing his eyes and making a whining noise. The difficulty was to get away from him, and his mode of pressing his visitor to stay was to take hold of the latter's breeches with his little sharp teeth. It has sometimes been doubted whether foxes wag their tails. This animal certainly used to wave his tail gently from side to side when he was pleased. He would follow the peon who attended to him like a dog, and ultimately (with a companion) was brought by me to England.

AGUARÁ (*Canis* sp. inc.).

We had also another species of Dog known to the peones as the Aguará. This animal is said by them to live in the rocky cerros and in the least frequented parts of the district, and to put in an appearance chiefly at lambing time. They also say that it is "muy brava," and that a dog which has no difficulty in overcoming an ordinary "Zorro" always has a hard fight with, and is sometimes turned by, an "Aguará." I procured some skins, but unfortunately the only skull I got could not be brought home. The points in which this animal differs from the ordinary grey fox are these:—(i.) It has the head shorter and broader in proportion. (ii.) The ears are short and rounded instead of long and pointed. (iii.) The general colour of the body is warmer, there being a flush of reddish yellow in the fur. (iv.) The brush is shorter in proportion. (v.) There is a line of nearly black hairs beginning at the scruff of the neck and passing down the line of the backbone; this hair is thickest at the scruff of the neck and above the shoulders, and approaches in character the mane of the *Canis jubatus*. The blackness is continued on to the brush. (vi.) The whole animal is stronger and more robust. (vii.) The appearance of the animal and the general aspect of the head in life are (judging from a supposed hybrid between the Aguará and Zorro) very different. This is caused by the ears being farther apart and slanting outwards more than those of the Zorro.

One or two of these were trapped at Santa Elena about April and May, when the Merinos were lambing, and I saw skins of others. The marks of difference are not so clear in all cases, and it is probable that interbreeding takes place (if indeed this Aguará is a distinct species).

I hope to obtain a skull, and then perhaps the identity of the Aguará of Uruguay may be settled.

It agrees with Dr. Burmeister's description of *Canis cancrivorus*, Desmarest, better than with any other I have read (Desc. Phys. p. 143).

One of these intermediate specimens, a half-grown example, was trapped and brought up to the estancia alive. Its different appearance, consequent upon the width of the skull and the distance

the ears were apart (these sloping outwards and being less upright, when pricked, than in the fox), was very marked. It was so unruly and savage that I gave up all hopes of bringing it home, as I was leaving the camp very shortly. The first night it managed to gnaw its way out of a new hutch just completed for the transport of my tame Zorros, but it was captured in one of the buildings early in the morning, being encumbered with a strip of raw hide tether.

The name Aguará has given rise to great confusion, and the identity of the species (probably more than one) is not yet settled.

I am aware that the Aguará has been described by some writers as a large reddish beast, but here I only describe the animal (easily distinguished from the Zorro) well-known as the Aguará by the residents in the camp where I was living.

Admiral Kennedy (Sporting Sketches in South America, p. 37) applies this name to the Maned Wolf, *Canis jubatus*, "a fine animal, with a bright ruddy coat, black mane and pads," saying that it was found in the Chaco (Northern Argentina). But this is not my animal. Mr. Hudson ('Naturalist in La Plata') distinguishes between the Aguará-guazú (*C. jubatus*) and the Aguará, writing that the former is the nearest ally of the latter, but that the latter is smaller and has no mane; that it is like the Dingo in size, but slimmer, and with a sharper nose, and has a much brighter red colour. This description does not agree with my animal, however. Dr. Burmeister identifies the Aguará-guazú of Azara with *C. jubatus*.

Señor Don Luis Cincinato Bollo, in a little book published at Montevideo in 1891, on Mammals, containing "la descripción de los animales indígenas de las Repúblicas Oriental y Argentina," distinguishes between the "*Aguará-chay*" (which he says lives in nearly the whole of South America, especially in the north of Argentina and in Paraguay and the Chaco) and the "*Aguará-guazú*," intermediate between a wolf and a fox (and doubtless *Canis jubatus*), which lives in "el alto Uruguay," on the banks of the lagunas of Corrientes, and also in the Chaco, Paraguay, Mendoza, and San Juan. But he does not describe either, merely saying that the former commits ravages among the sugar-plantations and fowl-houses, and that the latter feeds on eggs and small animals. Neither does this Aguará-chay seem to be my animal. Burmeister makes the Aguará-chay of Azara a synonym of *C. azarce*.

RIVER PLATE OTTER (*Lutra platensis*).

This Otter was fairly numerous in the rivers. The Otter in South America is not the shy animal that we are accustomed to here. It is indeed reported as "muy bravo," and even as apt to resent an intrusion on its haunts when it has young. A friend, long resident in the country, and a great fisherman, told me that once when he had hooked and was playing a big fish, an Otter suddenly came at the fish before his face; I forget whether it broke the line or wrenched the fish away, but it was one or the

other. I asked my friend why he did not write to the 'Field' about it; to which he replied, "Because I didn't want to be considered a bigger liar than common." For my part I can very well believe in the truth of the incident from what happened to me. I had shot with my little collecting-gun, and only wounded, a Cormorant (*Phalacrocorax brasiliensis*), a bird measuring nearly 30 inches in total length, which had been sitting on a dead branch in the small river along which I was walking. The wounded bird flapped away down the laguna, which curved rather sharply and was clothed slightly with sarandi bushes on the banks. I therefore lost sight of the bird for a minute, and when I came in sight of it again I saw a great commotion going on in the water. Hurrying up I saw the smooth sleek head of an Otter, which had the Cormorant (still flapping its wings) in its mouth. As I ran up the Otter dived out of sight with the bird, and although I waited a long time I saw neither again. The whole thing happened rather quickly, and I was so astonished that I never thought of trying a shot with my pistol, if, indeed, I should have had time to do so. I certainly expected the Otter to drop my bird when I appeared on the scene, as I was then ignorant of the extent of "cheek" possessed by the South-American Otter.

Just as they miscall the Coypú "Nutria," which means an otter, so in the camp they miscall the Otter "Lobo," which means sometimes a wolf, but on the South-American coast a seal or sea-lion, "Lobo de Mar" (*Otaria*); *e. g.* the Isla de los Lobos near Maldonado, Uruguay, where these animals (perhaps *Otaria jubata*) congregate.

WHITE-CHESTED OTTER (*Lutra brasiliensis*).

I only once caught a glimpse of the "Lobo de pecho blanco." While staying at an estancia on the north bank of the Rio Negro, several of us one blazing morning had ridden up on to a little cerro (one portion of which was whitened with the bones of a flock of sheep cut off here by a flood a few years before) which commanded a view of a fine bending reach of this beautiful river. We looked right down upon the varied greens of the monte bordering the river, and just in front of us upon a rapid, the sound of which came to us in waves borne by the hot breeze. A Black Cormorant was flapping heavily up stream, and at the head of the rapid an Otter showed itself occasionally; the glance of the sun on his white chest showed that we were looking at one of those Otters, the fierceness of which is always alluded to by anyone who knows their habits at all. One man, very fond of swimming, told me he should be afraid to bathe in a laguna which he knew to be inhabited by White-throated Otters with young. Another friend told me how he and his companion were annoyed by Otters taking the fish from their set lines at night in the Rio Negro.

Dr. Burmeister mentions this species being taken by chance on the Rio Uruguay on the Entre-Rios coast.

CRAB-EATING RACCOON (*Procyon cancrivorus*).

Soon after I arrived in Uruguay I heard a good deal about an animal called the "Mano peluda," but no one seemed to know what it was. In December, when riding up to the Rio Negro, we heard the name again, and stopping for an hour or two at a "pulperia" a league or two south of the river, where they had several very tame "bichos" of various kinds, I was delighted to find a Mano peluda. From vague descriptions I had heard on the way the Mano peluda might have been a sloth, an ant-eater, or a monkey, but I found (as Mr. C. J. F. Davie, of Montevideo, had suspected) that it was a Raccoon. To the latter gentleman I am indebted for a flat skin of this species, and through his kind offices, just before I left the country, I was enabled to procure a living specimen from Florida, where they are not *very* rare. This example reached England safely, and was pronounced by the authorities at the Society's Gardens to be identical with the Crab-eating Raccoon. I do not think the presence of this animal in Uruguay has been previously recorded. The specimen at the "pulperia," so wonderfully tamed by Don Luis or one of his sons, amused us by eating Huntley and Palmer's biscuits, which it held between its paws, sitting up meanwhile on its haunches. It moved rather in kangaroo fashion, but was less upright; the head is very pointed and foxy in appearance, though broader in proportion at the base and shorter. It had been captured in the neighbourhood, but was said to be rare. One or two people spoke of the desperate fights these animals engage in with dogs. The specimen I brought home lived chiefly on beef and was a great water-drinker.

SKUNK (*Conepatus mapurito monzoni*, subsp. nov.).

The Skunk which I procured in Uruguay is distinct in coloration from the typical White-backed Skunk (*C. mapurito*) which (subject to much variation) inhabits South America generally, and is described as being from 18 to 24 inches long, with a short tail of from 9 to 10 inches, and having the back white, sometimes marked with a median black stripe, and the tail white. In Mr. Hudson's 'Naturalist in La Plata' a Skunk is figured menacing a dog (p. 123), with the back, as far as can be seen, white, and a large bushy white tail laid over the animal's back and reaching nearly to its head. The Uruguayan Skunk has the whole of the body and the tail blackish brown, varying a little in shade, with a narrow white line (not more than three quarters of an inch wide at its thickest part and narrowing towards each extremity) on each side of the body, starting on the top of the head (where they are joined together) and reaching sometimes to the root of the tail, but in other cases not so far. I killed a good many Skunks and saw others, but they all answered to this description. I only once saw one with any white at all on the tail. This was at the end of autumn, when we killed one

which had some of the long hairs of the tail just tipped with white, giving the tail a frosted appearance when seen at close quarters, but not noticeable at a little distance. I made inquiries, but could not find anyone who had seen a white-backed or tailed Skunk in Uruguay. A dried skin measures 22 inches from the nose to the root of the tail; the tail itself is 8 inches long.

Dr. Burmeister ('Description Physique de la République Argentine,' tome iii. p. 162) includes the Argentine Skunk under the name of *Mephitis suffocans* of Illiger (which is, I suppose, a synonym of *C. mapurito*). The Skunk he describes agrees with mine tolerably well with the exception of the white lines, which are said to rise on each side of the head separately. In a note he says expressly "les deux raies sont toujours séparées sur le front." In this respect my animal agrees with Gray's description of the Skunk of Chile, which, however, has a white tail (*M. chilensis*). I would suggest giving the various Neotropical Skunks, which differ in a greater or less degree from one another, subspecific names.

The variation in the Uruguayan Skunk being constant, I have given it a name, and have called it after the river upon which I had my headquarters during my residence in Uruguay.

A skin and skulls of this subspecies are now in the British Museum.

It is curious that Burmeister makes no mention of a white-backed, white-tailed Skunk (as figured by Mr. W. H. Hudson) inhabiting Argentina.

The Skunk is very common in Soriano and Flores, and very tame and impudent. We were often annoyed by their coming about the estancia at night, probably after the fowls. In the still summer nights an overpowering smell of Skunk used to make us aware that one of these little beasts was wandering about, perhaps actually in the patio, and you never knew whether on going out you might not stumble over one or find it in your bedroom!

A Skunk will seldom trouble to get out of your way, and faces a dog rather than run from it. I only once saw one run away, and that was after I had peppered him at long range with a charge of snipe-shot. When out feeding on the camp in the evening the Skunk's paces are a shambling trot and a gallop. But they can go pretty fast when they like, *e. g.* the one I spoke of just now; every now and then it turned and faced the dog, who was not very keen to attack it, simply and solely because he had just killed another and was suffering all the penalties. This dog ("Jim") was a short-legged, heavily-built terrier—something between bull and fox—and the best vermin dog I ever saw. I never knew him turn from a Skunk, and always had great difficulty in getting him to leave one "stuck up" in a difficult position. I have seen him kill a good many, and in the course of his rather long life he must have killed hundreds. The strong smell did not seem to have affected his scenting powers, for he had a splendid nose and would line a lizard or anything else. When I heard him give

tongue I always knew he had "stuck up" a "bicho" of some kind, and he always barked until he fetched up his human companions (coming out into the open or mounting a big rock occasionally, either to look for them or to show where *he* was), but not after. This tribute to the good qualities of a great Skunk-slayer may perhaps be excused. But I believe all the dogs in the camp will tackle Skunks—many I know will—and there are lots of dogs which always seem to smell of Skunk more or less strongly. Even a pair of easy-going, good-natured Labrador dogs, whose only delight in life was to swim in the river, I have seen tackle a Skunk and take their dose like their betters. The discharge is certainly very severe—though I never saw any sign of dogs being blinded by it—and makes the best dogs wince, blink, and sneeze. They seem to like to make the Skunk discharge the first shot (for he can fire more than once) while they are as far off as possible; and for this purpose they make feints at it and bark violently, while the Skunk (if out in the open) menaces them with tail erect and back a little arched, every now and then advancing on the dog with little jumps and beating the ground with its fore feet. The dog, having taken one or more shots, finally rushes in (old hands do not, as a rule, run in at once). I saw "Jim" take a Skunk out of an old ant-hole (the entrance to which he had to enlarge) on one occasion, and get shot in the operation. He then made a rush and jerked the Skunk suddenly out on to the camp, where it stood in a menacing attitude; but the old dog walked deliberately up, took the Skunk by the head, and so dragged it about, cracking its skull at his leisure. Dogs are undoubtedly much distressed after killing a Skunk, rubbing their eyes and head in mud or dust, frothing at the mouth, and "snuffling" a good deal; but all the dogs I came across appeared to be fond of the amusement, and some were desperately keen on it. Late one still autumn afternoon, when the dogs had stuck up a Skunk among some "paja," I actually saw the discharge of the effluvium, like thin white spray or steam.

When discharging, the Skunk faces the dog, and erects its tail in an upright position, at a right angle, or a shade less perhaps, with the line of the body; but does not lay it along the back.

As for the effect of the smell on the human nose, to be near to and to leeward of a Skunk when it discharges is enough to scent one's clothes for a few days; and although a slight smell of Skunk in the open air is not unpleasant, yet of the stale smell, whether upon clothes or brought about a house by dogs, one gets terribly sick. What it is to be actually *hit* by a Skunk, I am glad to say I do not know.

The statement (often repeated) that it is possible to pick up a Skunk by the tail before it has time to discharge, and that while being swung by the tail the animal cannot discharge, has been laughed at as a joke practised on the credulity of those who believed in it. All I can say is that it is astonishing that anyone with an extended acquaintance with the camp should doubt this fact—but it is only natural that people should laugh at it if

they doubt it. On my making inquiries upon the point, the man I was staying with at once told me that riding one day up to one of his puestos, he was in time to see the peon come out of the rancho swinging a Skunk round his head; it made no smell and was dashed down on the ground and killed, inodorous. The Skunk had got into the house in some way. I also heard that the possibility of the thing was well known. Secondly, there was brought to me the skin of a Skunk which was "tailed" by a little boy as it was busily digging roots—so said the boy's father on my inquiring how it was caught; and he intimated that it was not by any means an unusual thing. Then one of the peons at the estancia, finding a Skunk asleep under his catre "tailed" it out; but unfortunately I did not see him do it. But at last I did see the operation. One of the peons found a Skunk one morning behind some wood piled up at the side of the big galpon—with a quick snatch he caught its tail and jerked it out. There he stood for five minutes swinging it gently round and round, there being no smell (beyond that which always clings about a Skunk). Another man then gave it a tap on the head with a stick, and the peon, thinking it was killed, threw it away. But no sooner was it on the ground than it was on its feet: up went the danger signal, and—well, we all had to clear out! The beast ran off and got into another galpon, where the dogs killed it; the whole place then smelt of Skunk, but until the beast touched the ground it was innocuous and inodorous.

It seems that the "scent"-gland cannot be opened unless the tail is at a right angle, or something near it, with the line of body; and that therefore when held by the tail the weight of the Skunk's body keeps the tail more or less in a line with it, and the Skunk is unable to discharge its vile secretion. The actions of the one mentioned above seem to prove this. To perform this operation it is of course necessary to catch the Skunk asleep, or otherwise deeply occupied (digging roots for instance), and to run the risk of its waking up or turning round and seeing you. I believe I could have easily done it myself, as I have more than once seen a Skunk lying curled up asleep in the daytime. Indeed, while looking for a parrot I had shot among some bushes, I very nearly stepped upon one which was curled up on the ground; and there it remained until (having picked up my bird) I put a revolver bullet through its body. However, I never cared to risk the loss of useful garments, it having been proved, I believe, that clothes once *well* dosed at close quarters may as well be burnt.

The Skunk passes the daytime in sleep, when undisturbed. In Soriano I used to find them laid up in holes under and clefts in the granite boulder rocks, in deserted ant-nests, among paja grass or in the crown of a big hassock of this, and in one or two cases on the ground among bushes. In the latter case it lies on its side curled round. When roused in a hole by a dog it presents a rather diabolical appearance as it pops its little vicious head out. Notwithstanding demonstrations of this kind, I have

only once seen a Skunk use its teeth. In this case one fastened on to Jim's flanks, and the old dog walked about with it hanging on for half a minute, looking round at it in much astonishment at this unusual and unseemly behaviour—the fact being that he could not get hold of his enemy, which turned with him. The Skunk's teeth are small in proportion to its size of body: a certain class of theorists would probably say that they had become smaller from disuse, the animal having another means of defence.

The Skunk seems to be an omnivorous feeder. Its long strong claws are well adapted for digging, and places where they have been scratching are to be seen all about the camp. They probably feed on small mammals, reptiles, and insects as well as roots, and are always credited with robbing hen-roosts.

With regard to the distance at which you can smell a Skunk, I cannot give an opinion; but you often smell them when you cannot see them, and just about sun-down the smell is a usual and familiar one about the camp; at night, too, a strong whiff of it as you sit or stroll in the patio is a very common occurrence. At a hundred yards to leeward with the slightest breeze the smell of a discharge would be very pungent. The smell is said to be a good "*remedio*" for the headache!

The local name for the Skunk is "*Zorillo*."

The Skunk being numerous, despite human persecution, it might be supposed to be prolific; and from the very meagre evidence I obtained it seems to be so—this evidence is that on the 31st October a female was killed close to the house with 13 young.

GREYSON (*Galictis vittata*).

This savage and diabolical-looking weasel, known as the "*Hurón*," coal-black except on the top of the head, back, and tail (on which parts the hair is grey and longer than the rest of the body), was not uncommon. The line of demarcation between the black of the face and the grey crown is cleanly cut, and gives the animal a curious and most spiteful appearance. Nor do its looks belie it. It is about the size of a medium-sized polecat, and resembles this animal in disposition and habits to some extent. But one of its characteristic habits is that of hunting in company. I have seen three hunting down a nearly dry cañada, and, just before, a friend had seen five together. When staying with a neighbour in February one of his sons trapped a *Hurón* in a box trap baited with an *Apereá*. We had some considerable difficulty in transferring him to a small cage, and so far from being timid, he would always come at your fingers with an angry barking squeal, if you put them near the bars of the cage. Moreover, when irritated he emitted one of the strongest and most pungent animal smells I ever experienced. In some respects it was more disgusting than Skunk. The cage was fifty yards or more from the house, out of sight behind the kitchen buildings, and, when it was to windward, it was quite possible when sitting outside the house-door to tell when anyone went to look at the *Hurón*. For this reason it would be difficult

to bring home an example captured when full-grown; I can imagine the captain ordering the cage to be heaved overboard! On the other hand, the same friend told me that he once caught some young ones, and that they became so tame that they were allowed to run about where they liked.

Vesperugo montanus (Phil.): Dobson, Cat. Bats, p. 189.

This was the only Bat of which I brought home specimens. It was common about the house, flying rather low among the ombús gums, wattles, and other trees in the patio, but not easy to knock down.

On the 3rd February, when riding across the camp and passing a small group of boulder rocks, I saw a Bat on the wing about 9 A.M. Of this day my Journal says:—"Blazing hot day, over 80° at 8 A.M., going up to 94° in the day, and standing at 86° at 9 P.M."

Another species is found in Uruguay with the fur of a very dark rich mahogany colour; but I omitted to keep the very poor specimen I came across and never got another.

MULITA (*Tatusia septemcincta*).

This Armadillo is, I hear on good authority, still numerous in parts of the Department of Florida, but in Soriano where I was it was uncommon. The only live specimen I obtained escaped in my temporary absence; it was exceedingly quiet and gentle in its manners. The "Mulita" occasionally figures on the menu at the hotels in Montevideo.

TATÚ (*Tatusia novemcincta*).

The Tatú is said to be found outside the monte along the Rio Negro. I saw the skull of a freshly-killed specimen hanging up in a paraiso tree in the patio of a house at which I stopped the night between the Rio Negro and Porongos. A puestero at Santa Elena said that a few years ago several were caught near the Paso del Durazno on the Arroyo Grande; and Mr. Davie wrote me word that the Tatú had occurred at Guaycurú, in the same pago, in his recollection. The Tatú is apparently disappearing gradually from the more populated camps. The Tatú is much larger than the Mulita, and is rather narrow in proportion to its length.

PELÚDO ARMADILLO (*Dasypus sextinctus*).

The Pelúdo, or Hairy Armadillo, said to be less particular as to its diet than its congeners, and not to despise carrion beef and mutton, was quite rare in the vicinity of Santa Elena, Soriano. The specimen I brought thence was caught close to the Arroyo Grande. It is always called Pelúdo in the camp, but it is not the Hairy Armadillo found about Buenos Ayres (*Dasypus villosus*, Desm.). In the list of animals in the Zoological Society's Gardens (1883) the habitat of the latter is given as "La Plata," and of the

present animal "Brazil." The specimen I brought home is now in the British Museum, and has been identified by Mr. Oldfield Thomas.

Scapteromys (Hesperomys) tumidus, Waterh.

I procured one specimen of this Rat in the monte of the Arroyo Grande. Mr. Thomas tells me that the British Museum previously only possessed the type of this species, an immature and much faded skin, and that the one I brought home is a very old example.

Habrothrix olivaceus (Waterh.).

I procured one specimen of this dark grey short-tailed Mouse.

HOUSE-MOUSE (*Mus musculus*).

There were plenty of Mice about the estancia house at Santa Elena, and they were often trapped. They seemed to me of a warmer colour than English examples, and I brought home a skin and another example in caña, thinking they were distinct from ours; Mr. Thomas, however, tells me they are identical. This is a good illustration of the travels of the House-Mouse. These colonists would of course manage the sea-voyage easily; but having evaded the vigilance of the custom-house (for who would pay a live-stock duty on them?), they would have to make their way to the railway-station and proceed by train to San José. Thereafter a journey of about seventy miles would lay before them, to be accomplished in the course of from three or four to ten days by bullock, mule, or horse-cart. They might easily come from San José among bales of alfalfa hay; but doubtless most of the journey was made in a cargo of "stores" and inside some case containing food for man.

TUCCO-TUCCO (*Ctenomys brasiliensis*).

TUCCO-TUCCO (*Ctenomys magellanicus*).

It is probable that there are more than these two species of Tuco-Tuco inhabiting the parts of Uruguay which I visited. About Santa Elena they lived in little colonies wherever there was a high-lying bit of ground of which the subsoil was light and sandy instead of granite rock. North of the Rio Negro, where the soil was more suitable, this animal was abundant, still living in colonies called "tuco-tuconales," over which it was necessary to ride slowly, the ground often giving way under your horse's feet. I have a vivid remembrance of laboriously walking over a big and very soft sandy tuco-tuconale one very hot day, terribly thirsty in consequence of being unable to obtain water at the place where we had eaten our breakfast, to another streamlet, and finding that dry!

I picked up a very few bones and remains about Santa Elena; but I never saw a live Tuco-Tuco, nor had a friend on the Rio

Negro who took some interest in such things. I have since my return, however, received from him the skin and skull of one. The measurements of this specimen are: head and body 10 inches, tail 3 inches. The fur is very soft and silky, and the hairs composing it on the back measure from .7 to .8 inch in length. The general colour of the upper parts is light hair-brown, the individual hairs being tipped with this colour for .2 of their length; the basal part of each hair is mouse-colour. The chin and throat are of the same brown as the rest of the head, the latter being a shade darker than the back. The rest of the underparts are dirty white. The tail is clothed only sparsely with bristly hairs. The incisors are orange-colour, the lower ones measuring .5 inch from where they emerge from the jaw-bone to their tips. It has been kindly identified by Mr. Oldfield Thomas as *Ctenomys brasiliensis*, while a skull which I brought from a tuco-tuconale at Santa Elena, Soriano, has been referred by him to *Ctenomys magellanicus*.

Not only were the colonies where the latter specimen was found smaller than those north of the Rio Negro (this might be occasioned by the nature of the ground), but the individual burrows and earths were smaller.

From the description of some writers it might be imagined that anyone being on a tuco-tuconale, whether by night or by day, would hear continually the loud double or treble note from which the animal takes its name. I was not so fortunate, for although I have very often passed over and waited quietly about on tuco-tuconales I have only once heard the sound, and that very slightly. Yet the fresh workings showed that these places were inhabited.

RESTLESS CAVY (*Cavia aperea*).

The "Apereá," exactly like our fancy guinea-pigs, but of a grey mouse-colour, paler underneath, is numerous, frequenting pajonales, and, near estancia houses, strips of camp fenced in for the protection of young plantations. Here they make runs among the grass, coming out chiefly about sundown to feed. They are almost as destructive as rabbits, and where foxes (which with the Hurón are their chief natural enemies) have been killed down they are apt to increase inconveniently. The fur is long and pretty, but generally seems very loosely attached to the skin. The Apereá does not burrow in the ground, though it drives tunnels in the thickest pajonales; nevertheless I have seen one, when surprised on a bare river-bank, go to ground in an old ant-hole, and it is probable that when the camp is very *pelado* they take refuge in any convenient shelter. I have known them run into a hole in the rocks and to find shelter about a shed erected for the benefit of some pure-bred stock.

CAPYBARA (*Hydrochoerus capybara*).

The Capybara or Carpincho, as it is always called in Uruguay, was found in some numbers along the Arroyo de Monzon, the Arroyo Grande, and some other smaller rivers near where I was

living in Soriano, but especially so along the banks of the Saúce, which runs through the camp belonging to my host at Santa Elena. The Carpinchos there were also very tame indeed,—from the fact that they were not molested. Accordingly I had exceptional advantages for observing this, the largest rodent in the world, in a state of nature.

A favourite locality is a broad laguna in the river, furnished with open water, and also beds of “camelotes,”—a sloping open grassy bank on one side, where the Carpinchos can lie in the daytime in the cooler weather, sleeping and basking in the sunshine; on the other a low shelving bank, clothed with “sarandi” scrub growing out into the black reeking mud and shallow water beyond. The stems of the sarandi in the festering mud have a gloomy appearance, sometimes brightened in spring by the large pink flower of a convolvulus climbing up the stems. In one or two places of this description I could almost always make sure of seeing some Carpinchos—sometimes a herd of a dozen or fifteen together, for they are sociable. You might meet with them at any part of the rivers where there was plenty of water, or in the monte on the banks, and I have “put one up” in thick dry paja fifty yards or more from a river. At night they are said to wander for some distance, to visit maize chacras and quintas. When alarmed they snort violently, and rush impetuously into the river with a great splash and noise. It is said that a frightened Carpincho making for the river will not turn out of its way for anything, and that if you are between them and the river they will knock you over. I can well believe it, for they give one the idea of being the most stupid animals in existence; and an examination of their skulls shows they are literally exceedingly thick-headed. The paces of the Carpincho are a walk and a hurried gallop reminding one of that of a pig, but most likely differing little in character from that of a guinea-pig, which the Carpincho resembles in shape and make. Probably their habit of rushing impetuously into the rivers is the reason why some horses are so frightened at these animals; the horses may have been scared when they went down to drink, or perhaps even charged by two or three lumbering brutes. Two horses which I rode were both frightened at Carpinchos, and one of them at the first sound of a snort became almost unmanageable and always tried to “clear out.”

Sometimes Carpinchos are much more tame than at others. If they are on the opposite side of a small river they often take no notice at all; and I have watched them in the autumn sitting up on their haunches like dogs sunning themselves, or lying asleep on their bellies with their fore paws stretched out in front of them and their heads in some cases laid on their paws, a little on one side. I have also on more than one occasion walked up within half a dozen yards of them. Sometimes when you approach a little herd of them they sound their alarm and merely watch you, walking slowly down to the water as you get nearer. At other times they rush impetuously into the water at the first sign of

danger. They are said to be much wilder on the larger rivers, the Rio Negro for instance, probably because they are less accustomed to seeing any people except those who hunt them. No doubt the protection they were afforded in the Santa Elena camp contributed largely to their tameness there, but I always noticed they were less tame on the Arroyo Grande than on its tributary the Saúce.

When disturbed and rising to their feet the Carpinchos get upon their fore legs first. The hair of the Carpincho is scanty, not much more plentiful than some pigs' bristles, which it greatly resembles. Their colour varies from dull brown to bright chestnut, and this irrespective of age, or size, or season either, for I have noticed all colours from spring to late autumn; smaller animals are, however, generally of the dull brown colour and *vice versá*. Their skins tan into splendidly thick, soft leather, which is used for belts, slippers, saddle-covers, &c. Like other thick-skinned animals, they like to wallow in mud. They work out hollows in the ground in which they wallow; these are known as Carpincho baths. The Carpincho does not go to ground, but lives on the banks of the rivers in such cover as it can find. It is capable of remaining under water and of proceeding for some distance under the surface; but when a herd has been disturbed at a laguna the members probably "lie low" by putting just their noses above water under the shelter of a bed of camelotes or other water-plants.

I should imagine, from the size of its incisor teeth, that the Carpincho would be capable of inflicting a most serious bite. One day late in autumn, as my friend's hounds were drawing the monte of the Arroyo Grande for a fox, we heard a tremendous "worry," but before the whip could get to them (and on his small active animal, really only a pony, he could, I believe, get anywhere) the pack went on. A pointer (one of a famous short-tailed breed), belonging to the estanciero at whose house we had met, came limping out of the monte with a fearful gash and incised bite in his neck, bleeding like a pig. It was said to be the work of a Lobo, but as I heard the snort of a Carpincho at the beginning of the worry I strongly suspect that it was the work of one of these beasts, of which there were a good many in that part of the river. The Carpincho, from its great weight and size, and thick, clumsy shape, would be a very awkward beast for dogs to hold, wherea3 they would probably master a Lobo if they had come to close quarters on land.

The Carpincho's hind feet are furnished with a kind of hoof in three divisions, each ending in a point; and I should be very sorry to get a fair kick from the hind leg of a living or dying animal.

Upon this point I quote from Señor Bollo, in whose book is depicted with photographic accuracy a group of eight Carpinchos in various life-like attitudes on the bank of a river. Señor Bollo writes:—"If the dogs follow it, it flies while it can; when it is exhausted by the blood it has lost, it places itself among the camelotes (a kind of water-plant) and defends itself from its persecutors, giving them bites with its long incisors."

When they take to the water they sometimes dive beneath the

surface at once and sometimes merely swim away ; they can when swimming along suddenly submerge themselves and disappear, and they can progress under water. I have watched them swimming in a laguna while I stood on the bank in full view. The upper half (or rather less), taking in the eyes, nose, and ears, of their oblong square heads is alone above water, the heads looking like logs of dead wood mysteriously propelled. They swim very slowly. When uneasy the Carpincho gives vent to its alarm-note as it swims along, raising its muzzle out of water for the purpose.

To produce this extraordinary noise considerable exertion is evidently necessary ; the animal's sides are momentarily inflated (perhaps to take in air for the purpose), when the sudden jerky heave comes and the whole massive body of the beast is shaken. The sound produced is very peculiar. It is very explosive, something between a grunt and a bark, and not unlike the sound of a big dog clearing its throat for a good choke, but is fuller and has more volume.

The Carpincho, with its heavy-looking head, apparently nearly all jaws, certainly presents a curious appearance. Señor Bollo says that it is so ugly that it has given rise to the saying in La Plata, "feo como un Carpincho."

I am inclined to think that the Carpincho takes more than a year to attain its full growth, as there were always a good many to be seen about half the size of the quite old ones, and that they breed before they are full-grown.

I am unable to say at what season they have young, or whether they breed at any particular season. I shot a young one about two feet long at the end of spring (26th November), and saw two not more than 18 inches long on the 8th May.

I am also puzzled to say how many young they have at a birth. On the 8th May I saw two females each with a young one, about 18 inches long, at her side. I have never seen more than one young one with a female, but this I have often seen ; the young one keeps close to its mother's side and they plunge into the water together. I am aware that the supposition that the Carpincho has only one young one at a birth is contrary to what has been written about this animal, but I merely give my own observations for what they are worth.

The Carpincho is a nuisance to the sportsman, as by plunging into the lagunas when he comes to close quarters they disturb any birds which may be there. They seem liable to scab, also to some fatal disease, to judge from the number one sees dead or in skeleton. After a long drought, with the rivers drying up and ceasing to flow for weeks, we had a heavy dash of rain, which put the rivers in flood for a day or two, stirred up the rotten mud, and brought down a lot of half-decayed bodies of cattle and bones ; when, therefore, the rivers sank again they were not very pleasant to the olfactory organs. About that date I saw several Carpinchos only just dead, with no marks of violence, except an eye cleaned out after death, no doubt by a Carancho or Vulture. One cannot

imagine these strong beasts being drowned, as they do not go to ground, but live in cover on the surface.

When shot and dying in deep water they sink at once, but will float in an hour or two.

In concluding these notes on the Carpincho I can only echo Señor Bollo's regret:—"Desgraciadamente este animal tan útil tiende á desaparecer de las tierras pobladas, porque continuamente se le persigue."

COYPU (*Myopotamus coypu*).

The Coypu or Nutria, to use the name by which it is always known in Uruguay, was not uncommon in some of the larger cañadas or watercourses. Here it inhabits the larger permanent lagunas. I have heard it stated that if a laguna is inhabited by Nutrias it is a sign that it never dries up in a drought. But during the seca which prevailed during the time I was in the country, and may well be distinguished as the seca grande, some places inhabited by Nutrias did dry up, but it was probably many years since they had done so previously. In the steep banks of the lagunas the Nutrias make drives, the mouths of the tunnels being half in and half out of the water when it is at its normal height. The Nutria is not a very shy animal. Some of them inhabited a little cañada by the side of which the sheep-dipping bañadéro at Santa Elena was situated, and adjoining the little potrero where the pigs were kept and all the sheep killed; they were probably attracted by the head of water kept up by a small dam. The Nutria swims with hardly a ripple and disappears noiselessly in the drive at the water-line. The body is dull brown, muzzle greyish, and there is a little warm brown on the side of the head. It swims with the nose, the top of the head, and a narrow line of the back out of water, all on a dead level, or almost so; the nostrils being very high up in the line of the skull, they are kept out of the water without the nose being poked up towards the sky. A half-grown one brought to me alive ate green maize readily, but died in my absence. An old male, when captured, made most extraordinary wailing cries of complaint.

[The Viscacha (*Lagostomus trichodactylus*), so common in the Argentine Republic, is not found in Uruguay, the great river of that name having apparently proved a bar to its extending its range into the Banda Oriental.]

PAMPAS DEER (*Cariacus campestris*).

In the neighbourhood of Santa Elena this species—the Gama, as it is called—has been exterminated, with the exception of a small herd preserved in a distant part of the camp belonging to that estancia, in the rincón of the Arroyos de Monzon and Grande. The herd in 1892-93 consisted, so far as was known, of about a dozen does and seven bucks. On that part of the Rio Negro which I visited it is also rare, but in some parts of Florida it is still numerous. One day at the end of January I rode up pretty close

to a buck, with a nice head, and two does, which had been feeding in a low green pajonale. They were then of a warm tawny, with large and conspicuous light-coloured stern-marks. The peculiar strong musky odour (rather like cat) was apparent after they had cleared out.

This species has no "brow"-tine. The ordinary head of a full-grown buck possesses the "tray" and has the beam branched once, six points in all on the head. I have, however, known a case in which the tray branch of one antler had bifurcated and the head had seven points. This head was carried by one of the Santa Elena deer which (it is believed) died a natural death and was most likely very old. The head approached even more nearly than usual that form of the normal Rucervine type assumed by Schomburgk's Deer (*Cervus schomburgki*), omitting of course the brow-tine, which is not carried by the Guazus. The bifurcations of the hind branch of the beam in this specimen are much closer together than in most other examples I have examined (including one other from Santa Elena), which resemble the figure in Admiral Kennedy's 'Sporting Sketches in South America,' p. 38. The does, at all events in their youth, have a few whitish spots on each side of the back. At a pulperia near the south bank of the Rio Negro I saw a tame fawn, a lovely little creature.

The other deer of Uruguay are the Red Deer or Ciervo (*C. pantodosus*), "el Ciervo de los pantanos" of Señor Bollo, now rare, found in the monte of the Rio Uruguay, and, as Mr. C. J. F. Davie of Montevideo tells me, also about Olinar, and in the jungles of the Department of Salto; and the little Swamp Deer, or Guazu-virá, a single-pronged-horned deer of the brocket type, now also rare (probably *Cervus simplicornis*, Illiger)—*vide* 'Description Physique,' p. 466. Mr. T. W. Burgess told me it used to be found on the north bank of the Rio Negro about the Rincon de las Palmas, and I believe it is also met with in the monte of the Rio Uruguay.

AZARA'S OPOSSUM (*Didelphys azaræ*).

Azara's Opossum, or the "Comadréja" as it is always called, is common and very fond of visiting estancias at night to rob hen-roosts and pick up any flesh food lying about. Dogs often give the alarm at night, but it is not easy to distinguish an opossum among the rafters or the branches of a tree. I remember one moonlight night coming on one suddenly as it sat on a low roof close to the house, but it is needless to say he was not there when I returned with a pistol. Another night the dogs at the same place stuck one up in a shed roof, which was at last discovered and potted by the light of a match. The Comadréja has a peculiar sour, sickening smell, emitted when it is irritated or frightened. The smell is not strong, but very pertinacious, and to some people it is more disgusting than that of a Skunk.

The feet of the Comadréja are formed for climbing, and it runs on the ground in an awkward tip-toe fashion. Yet it lives in a nearly treeless country, the river monte in South Soriano being

the only natural wood (composed of low thorny trees and big willows), and the Comadréja preferring to live on the higher camp, where it lies up in clefts and holes among the granite boulder rocks; among these a few low thorny bushes are found in some cases. I have never seen a Comadréja in the monte or up any native tree, but have no doubt they often climbed the trees at the estancias, which Mr. Davie tells me they are well able to do. Yet this animal has a very prehensile tail, naked and scaly. Having hauled one out of a cleft by the tail, I found that it twined the latter tightly round my fingers, the muscular power being considerable. They run up the boulder rocks with great agility. At bay, whether in rocky holt or old ants'-nest, laid up in a soft bed of dead grass, or "drawn" and facing a dog with arched back and grinning teeth, they make a snarling, grunting growl and a hiss. It is necessary to kill those taking up their quarters near houses, but they are often very difficult to kill. I have hammered one with a stick and thrown its heavy body against a rock time after time, and then, after carrying it by the tail for some distance, discovered that it was still alive. Much of the difficulty arises from their habit of shamming. Once I smoked out a female and two one-third grown young ones. A young one came first and was apparently laid out with a blow from my stick; I had to run round the rock after the next, and when I came back (in less than half a minute) the first had come to life again and departed! An old buck, worried by a dog and finished off with a shot in the head from a collecting-gun and left for dead, was found an hour or so after partly recovered.

A female was brought in on 30th October with ten young, naked, pink, and blind; head and body 2 inches, tail $1\frac{1}{2}$ inch long. Inside the mother's pouch were 9 teats only, which calls to one's mind the complaint of the eleventh little pig!

THICK-TAILED OPOSSUM (*Didelphys crassicaudata*).

The Comadréja colorada, as this species is called, is rare in the part of Soriano where I was living, only one having been killed there during my stay so far as I know. It is said by the residents to be excessively savage ("muy brava") for so small an animal. Responding to a suggestion of Mr. Davie, I inquired whether the female had a pouch capable of carrying her young, and one rather sharp and observant puestero's boy declared that it had. Although the adults are so savage, a lady of my acquaintance had a young one, taken from the body of its dead mother in the camp south of the Rio Negro in February, which was perfectly tame. It unfortunately shared the fate of so many ladies' pets and was slain by a large tom-cat belonging to a house at which she was staying on her way to the coast, a day or two before I went over there. The fur of this animal is very beautiful. It is of a warm, light chestnut, paler and yellower on the sides and lower parts. The upper parts have a flush on them of what can only be described as crimson.
